

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claim 14 is requested to be cancelled.

Claims 1, 13, 15-16 and 18-20 are currently being amended.

Claims 25-29 are being added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-13 and 15-29 are now pending in this application.

In the November 1, 2006 Official Action, the Examiner rejected claims 1-7, 9-12, and 20-23 under 35 U.S.C. §102(b) as being anticipated by U.S. Publication No. 2002/0142777, in the name of McGovern et al. The other claims were rejected under 35 U.S.C. §103(a) as being unpatentable over the McGovern et al. reference in view of at least one of U.S. Publication No. 2002/0028655, in the name of Rosener et al., U.S. Patent No. 5,592,480, in the name of Carney et al., U.S. Patent No. 6,573,869, in the name of Moore, and U.S. Patent No. 6,323,823, in the name of Wong et al.

In response to the above rejections and in order to clarify the nature of the present invention, Applicant has amended independent claims 1, 13, and 20 to more particularly describe the nature of the frequency reuse system implemented according to the present application.¹ In particular, the independent claims have been amended to more particularly

¹ The Examiner also objected to claim 14 in the November 1, 2005 Official Action. However, Applicant has canceled this claim as part of its amendment of independent claim 13.

describe how narrowband frequencies are used at cell boundaries. As is discussed, for example, at paragraph [0008] of the present application,:

dividing radio frequencies of the communication system into a wideband channel radio frequency and narrowband channel radio frequencies for which lower frequency re-use is utilized, and allocating to at least some cells of the communication system both the narrowband channel radio frequencies and the wideband channel radio frequency. As such, the narrowband channel radio frequencies are used in cell boundary regions such that narrowband channel radio frequencies are divided among adjacent communication cells.

As is also discussed in this section, and as discussed throughout the present application, the narrowband channel radio frequencies provide higher re-use of frequency channels without multiplying operator spectrum requirements. Applicant respectfully submits that this feature is neither taught nor suggested by the McGovern et al. reference. Instead, the McGovern et al. reference teaches a system where bandwidth is allocated in accordance with an initial channel aggregation strategy, and the bandwidth is increased based upon a request for a service that requires such additional bandwidth. This system is discussed in detail in Figure 3 and paragraphs [0023]-[0026] of the McGovern et al. reference. However, this arrangement does not allocate bandwidth based upon the location of the device, much less whether the device is located within a cell boundary. In fact, cell boundaries are not even discussed in the McGovern et al. reference, much less discussed in terms of adjusting bandwidth based upon the proximity of the device to a cell boundary. Similarly, none of the other reference cited by the Examiner discuss the allocation of bandwidth based upon the proximity to a cell boundary. For these reasons, Applicant respectfully submits that amended independent claims 1, 13 and 20, as well as their dependent claims, are clearly patentable over the prior art.

In addition to the above, Applicant notes that claims 2, 13 and 15-19 all also describe the use of channel re-use schemes in combination with the allocation method discussed above, and Applicant submits that this feature is also not present in the cite prior art. In particular, neither the McGovern et al. reference nor any other of the cited references teach the feature of a channel re-use scheme in combination with the use of narrowband channel

frequencies/narrowband bandwidth when the device at issue approaches or is in the vicinity of a cell boundary. In the November 1, 2005 Official Action, the Examiner cited paragraph [0023] of the McGovern et al. reference for the proposition of a re-use scheme being used. However, this section of the McGovern et al. reference discusses a channel-reuse scheme in only a very general sense, noting that “[i]f there are too many sites such that splitting the total bandwidth equally results in a bandwidth smaller than some minimum bandwidth (e.g., 12.5 kHz), a frequency reuse system could be employed using channels of the minimum bandwidth.” However, this section does nothing to suggest a specific method of implementing such channel re-use, and this section certainly does not teach or suggest channel re-use in combination the feature of using narrowband bandwidth/narrowband channel radio frequencies when a device is located in the vicinity of a cell boundary region. Furthermore, the remaining portions of the McGovern et al. reference are likewise silent as to these important features, and these features are not suggested by any of the other reference cited by the Examiner as well. For these reasons, Applicant submits that claims 2, 13 and 15-19 are also patentable over the cited references.

Lastly, Applicant has also added new claims 25-29. Independent claim 26 describes a method for decreasing required radio spectrum in a communication system using variable bandwidth where, when a device approaches a cell border, it is handed off to a narrowband channel radio frequency for communicating user data. As discussed at length above, this feature is neither taught nor suggested by the cited prior art. Claims 25 and 27-29 specifically recite the additional feature of using a narrowband bandwidth when a device is in an idle mode. This feature is discussed in detail, for example, in paragraph [0033] of the specification. As the McGovern et al. reference does not even generally discuss actions occurring when the device is in an idle mode, and the other references do not teach or suggest this particular feature, Applicant submits that these claims are clearly patentable over the prior art.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1450. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1450. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1450.

Date MAY 1, 2006

FOLEY & LARDNER LLP
Customer Number: 27433
Telephone: (312) 832-4553
Facsimile: (312) 832-4700

Respectfully submitted,

By 

G. Peter Albert, Jr.
Attorney for Applicant
Registration No. 37,268